

on all drainage areas; in Arizona marked excesses occurred, and in parts of Colorado the month was the wettest March of record. The amount of precipitation exceeded that of last October, the month of disastrous floods. There was this difference, however: In October most of the fall occurred in two days in the form of rain, while the precipitation in March was principally in the form of snow that fell almost daily over the greater part of the district. In Colorado there was no day without precipitation; in Utah and Arizona, only two days without; and in New Mexico, only three days without precipitation in some part of the area. The greatest monthly amount was 11.64 inches at Uncompahgre Plateau, Colo., and the least, 0.07 inch, at Hermanes, N. Mex. Monthly snowfalls of 30 inches or more occurred at one station in Wyoming, 27 in Colorado, 4 in eastern Utah, and 2 in Arizona. The maximum fall, 102 inches, occurred at Uncompahgre station, Montrose County, Colo.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

Watersheds.											
Green.		Grand		San Juan.		Little Colorado.		Gila.		Mimbres.	
Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.
1.82	+0.54	4.00	+2.31	3.76	+1.10	2.15	+1.40	3.18	+2.26	2.02	+0.88
										2.83	+0.89

The average number of days with 0.01 inch or more precipitation was 7 in western Wyoming; 15 in western Colorado; 11 in eastern Utah; 7 in western New Mexico; 7 in Arizona; and 10 in southeastern Nevada. For the district as a whole the average was 10 days.

#### MISCELLANEOUS.

The amount of sunshine was considerably below the normal. At Grand Junction it was 50 per cent of the possible; Durango, 58; Phoenix, 73; and Yuma, 80.

The relative humidity was materially higher than the average. The following are the values: Grand Junction, 67; Durango, 67; Phoenix, 56; and Yuma, 49 per cent.

#### SNOWFALL IN THE MOUNTAINS.

*Western Wyoming.*—The snowfall was above the normal and was reported well packed. The amount of snow at the headwaters of the western tributaries of the Green is said to be the heaviest in years.

*Western Colorado.*—On the drainage of the Yampa and White the snowfall was close to the average; on the other

watersheds, except in Summit County, in the upper reaches of the Grand, the snowfall was unusually heavy. Large drifts are common, and numerous destructive snowslides occurred in the southwestern counties. In general the snow contains a large percentage of moisture, and while fairly well packed, there is a general absence of layers of crust, and melting will be rapid. At the end of March the average depth on the Grand watershed, average altitude 8,700 feet 43 inches, was 17 inches greater; for the Gunnison, 8,800 feet 36 inches, or 7 inches greater; for the Yampa and White, 7,900 feet, 40 inches, or 21 inches greater; and for the San Juan and Dolores, 7,900 feet 18 inches, or 2 inches greater than at the corresponding date last year.

*Eastern Utah.*—There was a material increase in the amount of moisture stored in the mountains. The ground is well saturated and, the prospects for irrigation water is much improved.

*Western New Mexico.*—The San Juan Valley and northwestern part of the State had a wet, showery month over the lower country and a good snowfall in the higher mountains. Much soil moisture has resulted, improving the outlook for early water, although there will still be a great scarcity unless good rains continue.

*Arizona.*—The snowfall in the mountain districts of the north and north-central portions of the State was unusually heavy.

#### TEMPERATURES INJURIOUS TO PEACHES, APPLES, AND PEARS IN VARIOUS STAGES OF DEVELOPMENT.

A committee appointed by the Fruit Growers Association of the Grand Valley, Colorado, to advise growers in reference to smudging and to render them all possible assistance in the matter of supplying volunteer help, etc., made an investigation of temperatures injurious to peaches, apples, and pears in various stages of development, and report as follows:

Table showing at what temperature smudging is necessary in the various stages of development of peach buds.

	°F.
Peaches one-fourth inch in diameter.....	30
Dropping the shuck.....	31
Setting.....	31
Full bloom.....	29 to 30
Buds in pink.....	22
Buds swelling.....	15
Buds dormant.....	-15

Table showing at what temperature smudging is necessary in the various stages of development of apple and pear buds.

	°F.
Calyx closed.....	30
Flower gone, calyx closing.....	30
Petals dropping.....	31
Fruit forming.....	30
Full bloom.....	30
Buds in the pink.....	25
Buds separating.....	20
Buds swelling.....	15